



Aerospace Engineering Facility

www.vs.afrl.af.mil

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Space Vehicles Directorate

Air Force Research Laboratory

FACT SHEET



Located on the west side of Kirtland Air Force Base, New Mexico, the Air Force Research Laboratory (AFRL) Aerospace Engineering Facility is a “one-stop shop” for space experiment integration, verification, and testing. Its scientists and engineers test components and payloads, integrating them for space, and near space (high altitude balloon) flights.

This 16,500-square-foot facility is equipped to provide: vibration, shock acceleration, environmental, and thermal variation testing to flight components and payloads. Experimenters and contractors at AFRL’s Space Vehicles Directorate conduct integrated payload testing under realistic launch and orbit environments. This facility is operated by the Air Force Research Laboratory’s Space Technology Integration and Demonstration Division. The AEF houses a 60-foot-tall, 4,500-square-foot high bay laboratory for the assembly

testing of space flight hardware; included is an overhead rail system with two 7.5-ton cranes. Within the high bay area is a 600-square-foot class-100 clean room, a class-10,000 clean tent, three environmental chambers, and a thermal-vacuum chamber able to accommodate components up to nine feet in length.

Three vibration tables can exert 42,000 pounds of force on small satellites (up to 500 pounds). The AEF can also conduct electromagnetic compatibility/susceptibility testing within its 14’ W x 10’ L x 8’ H copper screen room. Test results enable researchers to calculate the likely survivability of satellites and experiments during launch and orbit. The facility also includes electrical and mechanical labs, a machine shop for hardware fabrication, and an up to date conference room capable of accommodating various forms of PC based media.

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